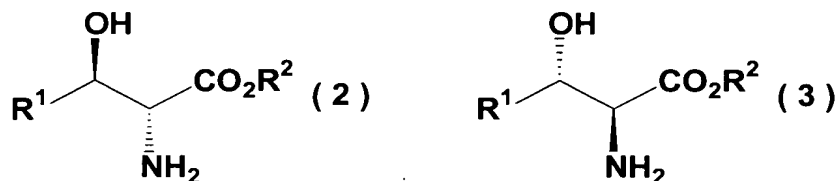


Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for producing optically active ~~α-hydroxy-α-~~
aminocarboxylic-β-hydroxy-α-aminocarboxylic acid derivative of formula (2) or (3)



wherein R¹ is C₁₋₂₀ alkyl group ~~[the C₁₋₂₀ alkyl group~~ which may be arbitrarily substituted either with C₄₋₁₂ aromatic group (the aromatic group may be arbitrarily substituted with halogen atom, C₁₋₆ alkyl group, C₁₋₆ alkoxy group, C₁₋₆ alkoxycarbonyl group, C₁₋₆ alkylcarbonyloxy group or CONR⁴R⁵ wherein R⁴ and R⁵ are independently of each other are hydrogen atom or C₁₋₆ alkyl group), C₁₋₆ alkoxy group, C₁₋₆ alkoxycarbonyl group or CONR⁴R⁵ wherein R⁴ and R⁵ are independently of each other are hydrogen atom or C₁₋₆ alkyl group]group,

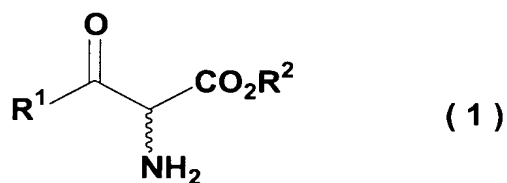
or R¹ is C₄₋₁₂ aromatic group ~~[the aromatic group~~ which may be arbitrarily substituted either with halogen atom, C₁₋₆ alkyl group which may be arbitrarily substituted with C₄₋₁₂ aromatic group (the aromatic group may be arbitrarily substituted with halogen atom), C₁₋₆ alkoxy group which may be arbitrarily substituted with C₄₋₁₂ aromatic group (the aromatic group may be arbitrarily substituted with halogen atom), C₁₋₆ alkoxycarbonyl group which may be arbitrarily substituted with C₄₋₁₂ aromatic group (the aromatic group may be arbitrarily substituted with halogen atom), C₁₋₆ alkylcarbonyloxy group (the C₁₋₆ alkyl group, C₁₋₆ alkoxy group, C₁₋₆ alkoxycarbonyl group, C₁₋₆ alkylcarbonyloxy group which may be arbitrarily substituted with C₄₋₁₂ aromatic group (the aromatic group may be arbitrarily substituted with

halogen atom)) or CONR^4R^5 wherein R^4 and R^5 are independently of each other are hydrogen atom or C_{1-6} alkyl ~~group~~group,

R^2 is C_{1-20} alkyl group ~~[the C_{1-20} alkyl group which may be arbitrarily substituted either with C_{4-12} aromatic group (the aromatic group may be arbitrarily substituted with halogen atom, C_{1-6} alkyl group, C_{1-6} alkoxy group, C_{1-6} alkoxycarbonyl group, C_{1-6} alkylcarbonyloxy group or CONR^4R^5 wherein R^4 and R^5 are independently of each other are hydrogen atom or C_{1-6} alkyl group), C_{1-6} alkoxy group, C_{1-6} alkoxycarbonyl group or CONR^4R^5 wherein R^4 and R^5 are independently of each other are hydrogen atom or C_{1-6} alkyl group]~~group,

or R^2 is C_{4-12} aromatic group ~~[the aromatic group which may be arbitrarily substituted either with halogen atom, C_{1-6} alkyl group, C_{1-6} alkoxy group, C_{1-6} alkoxycarbonyl group, C_{1-6} alkylcarbonyloxy group or CONR^4R^5 wherein R^4 and R^5 are independently of each other are hydrogen atom or C_{1-6} alkyl group]~~group,

characterized by comprising subjecting an α -aminoacyl acetic acid ester compound of formula (1)



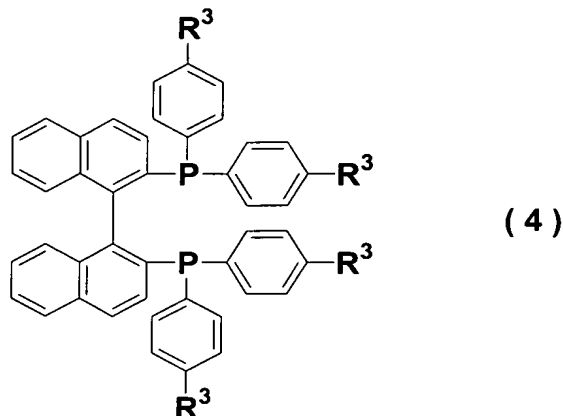
wherein R^1 and R^2 have the same meaning as the above, to hydrogenation by catalytic ~~asymmetric~~asymmetric hydrogenation in the presence of an acid, wherein the catalyst used for the catalytic asymmetric hydrogenation is a complex of ruthenium or iridium having an optically active phosphine ligand.

2. (Canceled)

3. (Currently Amended) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to ~~claim 2, claim 1~~, wherein ~~the Group VIII transition metal of the Periodic Table is ruthenium, iridium or rhodium, and~~ the optically

active phosphine ligand is an optically active bidentate phosphine ligand.

4. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 3, wherein the Group VIII transition metal of the Periodic Table is ruthenium, and the optically active bidentate phosphine ligand is represented by formula (4)



wherein R^3 is hydrogen atom, methyl group, or tertiary butyl group, absolute configuration is either S or R.

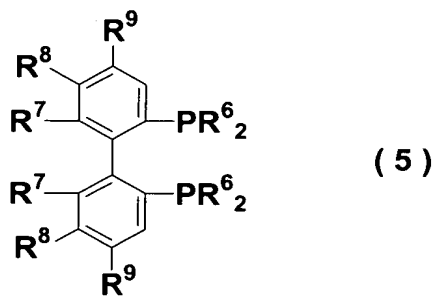
5. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 4, wherein the complex of a Group VIII transition metal of the Periodic Table is $RuHX^1(R^3-BINAP)_2$, $RuX^2_2(R^3-BINAP)$ or $Ru_2Cl_4(R^3-BINAP)_2(Et_3N)$ wherein $R^3-BINAP$ is the optically active bidentate phosphine ligand of formula (4), Et is ethyl group, X^1 and X^2 independently of each other are Cl, ClO_4 , BF_4 , PF_6 , $OCOCH_3$, $OCOCF_3$, $OCO-t-Bu$ or OSO_2CF_3 , the complex may be further coordinated with N,N-dimethylformamide, benzene, $AlCl_3$, $SnCl_4$, $TiCl_4$ or $ZnCl_2$.

6. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 5, wherein the complex of a Group VIII transition metal of the Periodic Table is $RuX^2_2(R^3-BINAP)$ wherein X^2 and $R^3-BINAP$ have the same meaning as the above, the complex may be further coordinated with N,N-

dimethylformamide, benzene, AlCl_3 , SnCl_4 , TiCl_4 or ZnCl_2 .

7. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 6, wherein $\text{RuX}^2_2(\text{R}^3\text{-BINAP})$ further coordinated with N,N-dimethylformamide or benzene wherein X^2 is Cl, $\text{R}^3\text{-BINAP}$ has the same meaning as the above is used.

8. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 3, wherein the Group VIII transition metal of the Periodic Table is iridium, and the optically active bidentate phosphine ligand is $\text{R}^3\text{-BINAP}$ wherein $\text{R}^3\text{-BINAP}$ has the same meaning as the above or a compound of formula (5)



wherein R^6 is phenyl group, naphthyl group (the phenyl group and naphthyl group may be arbitrarily substituted with C_{1-6} alkyl group or C_{1-6} alkoxy group), cyclopentyl group or cyclohexyl group, R^7 is methyl group or methoxy group, R^8 is hydrogen atom, methyl group, methoxy group or chlorine atom, R^9 is hydrogen atom, methyl group, methoxy group, dimethylamino group or diethylamino group, absolute configuration is either S or R.

9. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 8, wherein an acetic acid salt is added in the reaction system.

10. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 9, wherein when the complex of a Group VIII transition metal of the Periodic Table is prepared, an iodine compound is added.

11. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 10, wherein the optically active bidentate phosphine ligand is a compound of the formula (5).

12. (Original) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 11, wherein when the complex of a Group VIII transition metal of the Periodic Table is prepared, $[\text{Ir}(\text{cod})\text{Cl}]_2$ wherein cod is 1,5-cyclooctadiene is used.

13. (Previously Presented) The process for producing optically active β -hydroxy- α -aminocarboxylic acid derivative according to claim 1, wherein the acid is a strong acid.